asytec
Sondermaschinenbau

Industry: processing industry

Manufacturing cell for 3D-supported processing

Task

A cell needs to be programmable with CAD data. The unit must be suitable for different processing procedures. The CAD model (step) is read in order to be able to program the robot trajectory with the required machining contour. The solution must resemble CAM programming, which is familiar to most companies with CNC machining centres. A simple and intuitive platform for programming manufacturing process via 3D data (CAD) is to be aimed for.

Solution

A scalable basic construction enables the selection of different robot types depending on the requirements. The modular system includes a drawer system, a conveyor belt for inline operation and a rotation axis for producing the products. Additionally, an SPC drawer is available with which the produce can be removed for inspection. The drawers are lockable in both positions (open, closed), to ensure interruption-free changes. A changing system is located at the wrist of the robot, which guarantees safe and quick changing of the processing units.

Result

The cell is suitable for all industries which need to carry out processing or finishing with high contour accuracy. Depending on the configuration, the unit can be equipped with a protection class up to IP67 and with food compatible components. The cell is perfectly suitable for dosing, cleaning, processing, finishing and compression purposes. Its distinctive features are simple programming, low program creation costs, low changeover times, high product individualisation, pinpoint and free-form surface processing/finishing and its handling of dangerous processing substances. The simple programming and the resulting low program creation costs mean that the cell is predestined for the production of batch size 1 and offers a decisive competitive edge.

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